

PSYCHE.

A LIST OF THE ORTHOPTERA OF NEW ENGLAND.

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In my "Materials for a monograph of the North American Orthoptera," published in 1862, I added to the title: "including a Catalogue of the known New England species." Seventy-eight species were thus included, against thirty-nine in the series given in Harris's Insects injurious to Vegetation published in the same year but which did not pretend to completeness. No subsequent enlarged list covering the whole ground has since been issued, for Fernald's Orthoptera of New England does not add a single species. Morse, however, has given us a list of the principal family, the Acridiidae.

The present list gives ninety-eight species and includes the names of all known to occur in any part of New England and their distribution and abundance therein, as far as yet known. Species which are accidental visitors or which have plainly been introduced by accident are prefixed by an asterisk; excepting only that those which have been long introduced and are now thoroughly established in New England are not distinguished in this way. The Gryllidae need revision.

I add at the end a list of the species

recorded in 1862 and their corresponding names in the present list; three quarters of them have been changed. The prefixed figures refer to the pages of the original paper.

FORFICULIDAE.

**Forficula percheroni* Guér. Known in New England only by a specimen in the Harris collection, marked by him as taken May 30, presumably in the vicinity of Boston. Probably an accidental seaport importation from the West Indies or South America.

Labia minor (Linn.). Widely spread; it has been taken in every one of the states excepting Rhode Island; from eastern Massachusetts I have seen specimens from about Boston, Cambridge, Medford (Sanborn) and Beverly (Burgess). Fernald reports it at Amherst, Mass., flying to light.

BLATTIDAE.

BLATTINAE.

Ischnoptera pennsylvanica (De Geer). The only new England specimen I have seen was taken in Winthrop, Mass. I have specimens, how-

ever, from Montreal and it probably occurs in all the states excepting Maine and perhaps New Hampshire.

Ischnoptera uhleriana Sauss. (*Platamodes unicolor* Scudd.). A common species under old logs in woods. Mass., Conn. (Norton). In my Catalogue of U. S. Orthoptera, I overlooked the identity of *uhleriana* and *unicolor*. I have compared the types.

Blatta germanica Linn. Found everywhere in abundance, especially in dwellings in towns and cities.

Phyllodromia borealis (Sauss.). (*Ectobia flavocincta* Scudd.) Under objects lying on the ground in woods. Prout's Neck, Scarborough, Me.; about Boston, Mass. (Harris); Conn. (Norton). In my Catalogue of U. S. Orthoptera I accidentally omitted the synonymy given above; both descriptions appeared the same year, but months apart.

NYCTOBORINAE.

* *Nyctobora sericea* Burm. About Boston. Introduced from South America. A single example seen.

PERIPLANETINAE.

* *Eurycotis* sp. A nymph of some species of this genus with the pronotum distinctly margined, except posteriorly, with yellow, — possibly *E. finchiana* (Sauss.) taken in Wellesley, Mass., on a bunch of bananas was sent me by Mr. A. P. Morse.

Stylopyga orientalis (Linn.). Very common along the seaboard, especially

in city dwellings; a cosmopolitan species.

Periplaneta americana (Linn.). Common along the seaboard, especially in city dwellings and warehouses; a cosmopolitan species.

PANCHLORINAE.

* *Panchlora poeyi* Sauss. Occasionally occurs in seaboard cities, probably introduced in banana-bunches.

* *Pycnoscelus surinamensis* (Linn.). A single immature specimen of this tropical roach has been taken in central Massachusetts at Springfield.

PERISPHAERINAE.

* *Hormetica advena* Scudd. A single specimen, taken in Belmont, Mass., was doubtless introduced from tropical America, probably in banana-bunches.

PHASMIDAE.

Diapheromera femorata (Say). Very common on trees and bushes and especially on scrub-oak. I have never seen specimens from Maine, but it is found in all the other New England states.

ACRIDIDAE.

TETTIGINAE.

Nomotettix cristatus (Scudd.). "Common locally over the larger part, at least, and probably occurs in the whole of the district. . . . Found everywhere on light soils, but especially in dry pastures" (Morse)

Tettix granulatus (Kirby). "Found over probably the whole of New Eng-

land. . . . Prefers sedgy meadow lands" (Morse).

Tettix ornatus (Say). Occurs throughout New England in localities like the last, but is not so common.

Paratettix cucullatus (Burm.). Occurs only in the southern part of New England, in Connecticut and rarely in Massachusetts. It seems to be found generally near water.

Tettigidea parvipennis (Harr.). Abundant throughout New England. Prefers "moist, grassy and sedgy meadows, particularly on rather light soil" (Morse).

TRYXALINAE.

Orphulella pelidna (Burm.). Common in the three southern states, especially near the seaboard.

Orphulella speciosa (Scudd.). Very abundant throughout the district.

Orphulella olivacea (Morse). Known in New England only from southwestern Connecticut.

Dichromorpha viridis (Scudd.). "Found throughout Connecticut, in Rhode Island, and in central and southwestern Massachusetts" (Morse).

Chlocaltis conspersa Harr. Throughout New England and not uncommon, near woodland.

Stenobothrus curtispennis (Harr.). Most abundant and thoroughly distributed, being everywhere one of the commonest species.

Mecostethus lineatus (Scudd.). "Rather common in southern New England in wet, sedgy meadows" (Morse).

It has also been taken at elevated points in Massachusetts, such as Williamstown, and at Norway, Me.

Mecostethus gracilis (Scudd.). In northern and elevated parts of New England, from the summits of the White Mts. to the Berkshire Hills.

Mecostethus plutypterus (Scudd.). Much the rarest species of the genus and so far only definitely known from New England, in Massachusetts and Connecticut.

OEDIPODINAE.

Arphia xanthoptera (Germ.) Found in the southern half of New England in no great abundance.

Arphia sulphurea (Fabr.). Common in pastures throughout New England.

Chortophaga viridifasciata (De Geer). Abundant everywhere.

Encoptolophus sordidus (Burm.). Very common throughout.

Camnula pellucida (Scudd.). Common, often excessively common in northern New England, especially on dry hillsides, but rarely occurring in the southern half of the district, though it has been taken in Connecticut.

Hippiscus rugosus (Scudd.). Occurs rarely in Maine (Norway) and eastern Massachusetts.

Hippiscus tuberculatus (Palis.). Found throughout New England, but never very common, apparently more abundant in the northern than in the southern portions.

Dissosteira carolina (Linn.).

Everywhere common, especially by roadsides, and so much in evidence.

Spharagemon collaræ (Scudd.). Common, but rather local, on dry uplands throughout all but the northernmost portions of New England.

Spharagemon saxatile Morse. Common on rocky hillsides in Massachusetts and Connecticut.

Spharagemon bolli Scudd. Common on barren ground throughout the greater part or all of New England, but not definitely recorded from the northernmost portions.

Scirtetica marmorata (Harr.). Along southern seacoast, not very common.

Psinidia fenestralis (Serv.). "A common and widely distributed species, occurring nearly everywhere in sandy spots in southern New England, and probably throughout the entire district" (Morse). It has been taken as far north as Fryeburg, Me., and North Conway, N. H.

Trimerotropis maritima (Harr.). Common on the sands along the immediate seashore, from the southernmost corner of Maine southward.

Circotettix verruculatus (Kirby). Common on bare ledges in northern New England, rarely occurring so far south as Massachusetts, though it has even been reported from Canaan, Conn.

ACRIDINAE.

Pseudopomala brachyptera (Scudd.) Not uncommon locally . . . on waste lands. . . . It doubtless occurs in all

of the New England States" (Morse), but has not yet been reported from Vermont, New Hampshire or Rhode Island.

Schistocerca rubiginosa (Harr.). The seacoast, from central Massachusetts southward; not uncommon.

Schistocerca alutacea (Harr.). Southern seaboard; not uncommon.

**Schistocerca americana* (Drury). An immigrant colony from the south settled on the seaboard in eastern Massachusetts some years ago, but seems now to have disappeared. The species will probably be found occasionally in southwestern Connecticut.

Hesperotettix brevipennis (Thom.). Eastern Massachusetts, not uncommon locally. It will doubtless be found in Connecticut, in suitable localities.

Podisma glacialis (Scudd.). Western Maine, northern New Hampshire at high elevations; Summit of Greylock, Mass.

Melanoplus atlantis (Riley). Abundant everywhere, sometimes destructive.

Melanoplus scudderi (Uhl.). Southern Massachusetts and Connecticut.

Melanoplus manicus (Smith). Elevated localities in Maine and New Hampshire. It is also reported from North Madison and Woodstock, Conn.

Melanoplus dawsoni (Scudd.). This is a western species found from Assiniboia to Nebraska; but it has occurred near Toronto, Canada, and a single specimen has been taken at Brunswick, Me. It may be looked for in northern New England.

Melanoplus fasciatus (Barnst.). Common throughout New England.

Melanoplus femur rubrum (De Geer). Exceedingly abundant everywhere.

Melanoplus extremus (Walk.). In the northern half of New England, reaching the summits of the highest mountains; common.

Melanoplus minor (Scudd.). Common throughout New England.

Melanoplus collinus (Scudd.). Common throughout New England, especially on hillsides.

Melanoplus femoratus (Burm.). Very common everywhere.

Melanoplus puctulatus (Uhl.). Everywhere except in northernmost portions, but local, being found in the vicinity of pine trees.

Paroxya floridana (Thom.). Not uncommon, locally, in the southern third of New England.

LOCUSTIDAE.

PHANEROPTERINAE.

Scudderia texensis Sauss.-Pict. Not uncommon everywhere except in northernmost districts.

Scudderia pistillata Brunn. Common everywhere, though not yet reported from southernmost localities. It extends eastwardly to Nova Scotia, where it is the only species of the genus known.

Scudderia curvicauda (De Geer). Common throughout.

Scudderia furcata Brunn. Common everywhere.

Scudderia septentrionalis (Serv.). Rare and known only from Maine and Massachusetts.

Amblycorypha oblongifolia (De Geer.) Common in the southern half of New England.

Amblycorypha rotundifolia (Scudd.). Common in the southern half or more of the district.

Microcentrum laurifolium (Linn.) Massachusetts, rare.

PSEUDOPHYLLINAE.

Cyrtophyllus perspicillatus (Linn.). Found in isolated colonies in Massachusetts and more generally, but still locally, in Connecticut.

CONOCEPHALINAE.

Conocephalus ensiger Harr. Common in all but the northernmost parts of New England.

Conocephalus robustus Scudd. Common along the southern shores of New England.

**Conocephalus triops* (Linn.). A southern species which has occurred accidentally in eastern Massachusetts and may perhaps be found in Connecticut.

Orchelimum agile (DeGeer). Common throughout New England.

Orchelimum herbaceum Serv. Found only on the southern borders.

Orchelimum glaberrimum (Burm.). Connecticut.

Xiphidium brevipenne Scudd. Everywhere very common.

Xiphidium fasciatum (DeGeer). Common everywhere.

DECTICINAE.

Atlanticus pachymerus (Burm.). Rare; reported only from Connecticut.

Atlanticus dorsalis (Burm.). Rare; reported only in a few instances, but from every state but Maine.

STENOPELMATINAE.

Ceuthophilus terrestris Scudd. The northern half of New England to the highest summits of the mountains; not uncommon.

Ceuthophilus brevipes Scudd. Known only from Grand Manan, Me., but not uncommon there.

• *Ceuthophilus neglectus* Scudd. A common species, doubtless occurring throughout New England, though not yet reported from Maine, Connecticut or Rhode Island.

Ceuthophilus maculatus (Say). Common throughout New England.

GRYLLIDAE.

GRYLLOTALPINAE.

Gryllotalpa borealis Burm. Known only from the southern half of New England, but it probably occurs also in the northern, as it has been taken on the island of Anticosti in the lower St. Lawrence.

Tridactylus terminalis Uhl. It has been taken only in Massachusetts and Connecticut.

GRYLLINAE.

Nemobius fasciatus (DeGeer). Common everywhere.

* *Nemobius cubensis* Sauss. A single specimen, labelled as from Norway, Me., is in the Cambridge museum.

Nemobius carolinus Scudd. Taken at a number of different places in Maine, Massachusetts and Connecticut. It is not common in the North.

Gryllus abbreviatus Serv. Common everywhere.

Gryllus luctuosus Serv. Common everywhere, but especially in the north, where it has even been taken on the summit of Mt. Washington.

Gryllus pennsylvanicus Burm. Common in the southern half of New England.

Gryllus neglectus Scudd. Common in the southern half at least.

Gryllus domesticus Linn. I have seen no specimens from New England, but have been told that it occurs sparingly on our southern borders.

OECANTHINAE.

Oecanthus bipunctatus (DeGeer). Has been taken at New Haven, Conn., by A. P. Morse.

Oecanthus niveus (DeGeer). Common throughout at least the southern half of New England.

Oecanthus pini Beut. Connecticut.

NOTE. — I have not studied the New England species of *Oecanthus*, but doubtless several other forms recognized

outside its limits will be found within them.

ENEOPTERINAE.

**Apithes agitator* Uhl. This southern species, ranging as far north as Maryland, has been found breeding in the greenhouses of the Botanic Garden at Cambridge, Mass.

REVISION OF THE LIST OF 1862.

Forficulidae.

415. *Spongophora bipunctata* = *Forficula percheroni*.
Labia minuta = *Labia minor*.

Blattidae.

416. *Stylopyga orientalis* = Same.
Periplaneta americana = Same.
417. *Platamodes unicolor* = *Ischnoptera uhleriana*.
418. *Ectobia germanica* = *Blatta germanica*.
Ectobia lithophila = *Ischnoptera uhleriana*.
419. *Ectobia flavocincta* = *Phyllodromia borealis*.
422. *Pycnoscelus obscurus* = *Pycnoscelus surinamensis*.

Phasmidae.

423. *Diapheromera femorata* = Same.

Acridiidae.

454. *Opomala brachyptera* = *Pseudopomala brachyptera*.
455. *Chloealtis conspersa* = Same.
Chloealtis viridis = *Dichromorpha viridis*.
Chloealtis punctulata = *Dichromorpha viridis*.
456. *Stenobothrus curtipennis* = Same.
Stenobothrus melanopleurus = *Chloealtis conspersa*.
457. *Stenobothrus longipennis* = *Stenobothrus curtipennis*.

458. *Stenobothrus maculipennis* = *Orphulella pelidna*.
459. *Stenobothrus aequalis* = *Orphulella speciosa*.
460. *Stenobothrus bilineatus* = *Orphulella speciosa*.
461. *Stenobothrus propinquans* = *Orphulella pelidna*.
Tragocephala infusca = *Chortophaga viridifasciata*.
Tragocephala viridifasciata = *Chortophaga viridifasciata*.
462. *Arcyptera lineata* = *Mecostethus lineatus*.
463. *Arcyptera platyptera* = *Mecostethus platypterus*.
Arcyptera gracilis = *Mecostethus gracilis*.
464. *Caloptenus femur rubrum* = *Melanoplus femur rubrum*.
465. *Caloptenus punctulatus* = *Melanoplus punctulatus*.
Caloptenus bivittatus = *Melanoplus femoratus*.
466. *Acridium alutaceum* = *Schistocerca alutacea*.
467. *Acridium rubiginosum* = *Schistocerca rubiginosa*.
468. *Oedipoda carolina* = *Dissosteira carolina*.
Oedipoda phaenicoptera = *Hippiscus tuberculatus*.
469. *Oedipoda rugosa* = *Hippiscus rugosus*.
Oedipoda xanthoptera = *Arphia xanthoptera*.
470. *Oedipoda sulphurea* = *Arphia sulphurea*.
Oedipoda aequalis = *Spharagemon collaris*.
471. *Oedipoda verruculata* = *Circotettix verruculatus*.
472. *Oedipoda maritima* = *Trimerotropis maritima*.
Oedipoda marmorata = *Scirtetica marmorata*.
Oedipoda eucrata = *Psinidia fenestralis*.
Oedipoda pellucida = *Camnula pellucida*.
473. *Oedipoda sordida* = *Encoptolophus sordidus*.

474. *Tettix granulatus* = Same.
Tettix ornatus = Same.
 475. *Tettix triangularis* = *Tettix ornatus*.
Tettix cucullatus = *Paratettix cucullatus*.
 477. *Tettigidea lateralis* = *Tettigidea parvipennis*.
Tettigidea polymorpha = *Tettigidea parvipennis*.
 478. *Batrachidea cristata* = *Nomotettix cristatus*.
 479. *Batrachidea carinata* = *Nomotettix cristatus*.

Locustidae.

434. *Ceuthophilus maculatus* = Same.
Ceuthophilus brevipes = Same.
 444. *Cyrtophyllus concavus* = *Cyrtophyllus perspicillatus*.
Phylloptera oblongifolia = *Amblycorypha oblongifolia*.
 445. *Phylloptera rotundifolia* = *Amblycorypha rotundifolia*.
 447. *Microcentrum affiliatum* = *Microcentrum laurifolium*.
 448. *Phaneroptera curvicauda* = *Scuderia curvicauda*.
 449. *Conocephalus ensiger* = Same.

449. *Conocephalus robustus* = Same.
 451. *Xiphidium fasciatum* = Same.
Xiphidium brevipenne = Same.
 452. *Orchelimum vulgare* = *Orchelimum agile*.
Orchelimum concinnum = *Orchelimum herbaceum*.
 453. *Orchelimum glaberrimum* = Same.
Thyreonotus pachymerus = *Atlanticus pachymerus*.
 454. *Thyreonotus dorsalis* = *Atlanticus dorsalis*.

Gryllidae.

425. *Tridactylus terminalis* = Same.
 426. *Gryllotalpa borealis* = Same.
Gryllotalpa longipennis = *Gryllotalpa borealis*.
 427. *Gryllus luctuosus* = Same.
Gryllus abbreviatus = Same.
Gryllus angustus = *Gryllus abbreviatus*.
 428. *Gryllus neglectus* = Same.
Gryllus niger = *Gryllus pennsylvanicus*.
 430. *Nemobius vittatus* = *Nemobius fasciatus*.
Nemobius fasciatus = Same.
 431. *Oecanthus niveus* = Same.

LIFE HISTORIES OF NORTH AMERICAN GEOMETRIDAE.—XIV.

BY HARRISON G. DYAR, WASHINGTON, D. C.

Eois suavata Hulst. — This species was described by Dr. Hulst from the moths bred from the larvae here described.

Egg. Elliptical, rounded, only slightly flattened, one end distinctly smaller, the other (micropylar) scarcely flattened, not at all truncate. Reticulations distinct, strongly raised and thick, uniform, roundly hexagonal, alike throughout except just at the micropyle where they become small and delicate; they are somewhat coarser over the rest of the large end. Delicate blue-green, only slightly shining. Size $.8 \times .6 \times .5$ mm. Later a few red specks appeared; still later the color

became white with an irregular green mark on the side and indistinct red specks at the large end.

Stage I. Head flat before, round, a shallow notch on the vertex, the vertex and sides of equal width. White on face, banded around the vertex and sides with brown-black; mouth dark; width .3mm. Body moderately slender, the legless segments well drawn out, normal. White with seven broad, black, transverse bands as wide as the intervening white spaces. Joints 2 and 3 white, the cervical shield large, concolorous; joints 4 to 10 broadly black banded cen-